

IN THE DRAWINGS:

Please delete figures 1-30b and replace with new figures 1-30b, which are each marked as a “Replacement Sheet.” Please delete figures 31a-46i and replace with new figures 31a-46i, which are each marked as “New Sheet.”

**RESPONSE**

This is a response to the Office Action dated March 8, 2005. Claims 43-65 are pending in the application. In the Office Action, the Examiner objected to various informalities in the specification. In addition, the Examiner objected to claims 54-64 under 37 C.F.R. § 1.75(a) for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. The examiner rejected claims 43-53 and 60-64 under 35 U.S.C. § 102(b) as being anticipated by “Global Positioning System applications at the Bonneville Power Administration” (“Street”). Claims 54-59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Street in view of “Multichannel Continuous Harmonic Analysis in Real-Time (“Miller”).

The rejections from the Office Action of March 8, 2005 are discussed below in connection with the various claims. No new matter has been added. Reconsideration of the application is respectfully requested in light of the following remarks.

**I. DRAWING OBJECTIONS**

The Examiner objected to the drawings as containing various informalities. With this response, appropriate corrections have been made. No new matter has been added. In particular, the following corrections have been made:

1. Figures 1-30b have been amended to be properly identified as “Replacement Sheet” on the top margin of each Figure. They were originally replaced in the Preliminary Amendment on February 18, 2004 to correct the sheet numbers to reflect the new total number of sheets after the addition of Figures 31a-46i also added by that Preliminary Amendment.
2. Figures 31a-46i have been amended to be properly identified as “New Sheet” on the top margin of each Figure. Figures 31a-46i are identified as “New Sheet” because the Preliminary Amendment, dated February 18, 2004, failed to identify each figure as a “New Sheet” when they were added in that Preliminary Amendment.

## **II. SPECIFICATION OBJECTIONS**

The Examiner objected to the specification as containing various informalities. With this response, a substitute specification has been provided which corrects all of the errors noted by the Examiner. No new matter has been added. A marked up version of the substitute specification has also been provided showing the changes made except it does not detail the formatting changes and font changes made to the tables.

On page 1, the Examiner has objected to the incorporation by reference of 08/798,724, now U.S. Pat. No. 5,995,911, by U.S. application serial no. 08/798,723. The current application is a divisional of Application Serial no. 10/068,431, now U.S. Pat. No. 6,694,270, therefore, the current application explicitly incorporates the matter of its parent. The parent (now U.S. Pat. No. 6,694,270) was amended to explicitly incorporate all the text of 08/798,724, now U.S. Pat. No. 5,995,911. Accordingly, Applicant believes that all essential material has been explicitly incorporated in compliance with M.P.E.P. § 608.01(p)(I).

Paragraph 4 of the current office action states that the listing of references in the specification is not a proper information disclosure statement. However, the references listed in the specification were not intended to be information disclosures and are merely used as examples of what is commonly known in the art. Further, certain of these references were listed in proper Information Disclosure Statements.

In particular, the following corrections have been made:

1. On the cover page, the reference number for the assignee ("PML Ref. No. 300110") has been added underneath the reference number of the attorney for Applicant;
2. On page 1, the Related Applications section has been updated;
3. On page 1, paragraph 0001, line 7, the patent application identified as "08/798,923" has been corrected to "08/798,723";
4. On page 13, paragraph 0076, "FDDI" has been changed to "fiber distributed data interface (FDDI)"; and

5. The tables on pages 28-48, 50-68 and 71, have been modified so the character size is increased, the line spacing is 1.5 lines, and the margins at the bottom of those pages is increased.

Accordingly, Applicants respectfully request that the Examiner withdraw these objections to the Specification.

### **III. REJECTIONS UNDER 37 C.F.R. § 1.75(a)**

The Examiner objected to claims 54-64 under 37 C.F.R. § 1.75(a) for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Additionally, the Examiner objected to claims 60 and 64 for a lack of connection between the first two steps and the last two steps of the claim. With this response, claims 54, 57, 60, 63, and 64 have been amended for clarity and not for reasons related to patentability. Applicant contends that these amendments correct the 37 C.F.R. § 1.75(a) problem for claims 54-64.

Accordingly, Applicant respectfully requests that the Examiner withdraw this objection to claims 54-64.

### **IV. REJECTIONS UNDER 35 U.S.C. § 102**

Independent claims 43, 60 and 64 were rejected under 35 U.S.C. § 102(b) as being anticipated by Street. Applicant submits that Street does not anticipate claims 43, 60 and 64 for the reason that Street does not disclose all of the elements of each of these claims.

Claims 43, 60 and 64 relate to an energy measurement device or method for measuring electrical energy. The device discloses “at least one sensor...operative to sense at least one electrical parameter...and generate at least one analog signal.” The at least one analog to digital converter is coupled with the sensor and a processor is coupled with the analog to digital converter. A local synchronization circuit is coupled with both the processor and at least one time synchronization receiver that generates at least one time synchronization signal. The local synchronization circuit is “operative to receive at least one timing clock signal and generate a synchronized timing clock signal ... by altering said at

least one timing clock signal based on at least one of said at least one time synchronization signal.”

Street discloses the use of “the Global Positioning System (GPS) to enhance power system performance and reliability.” Street, p. 244, Summary. “The system [in Street] consists of remotes, synchronized by GPS, installed at cardinal power system nodes and a central master which polls the remotes for fault transient time-of-arrival data.” Street, p. 244, section 1. Introduction.

Street fails to disclose a local synchronization circuit that generates a synchronized timing clock signal based on at least one time synchronization signal. Street does disclose GPS timing receivers used to derive precise time. Street, p. 245, Section 3. GPS SYSTEM OVERVIEW. However, claim 43 discloses a local synchronization circuit “coupled with [the] processor [and] operative to receive at least one timing clock signal and generate said synchronized timing clock signal ... based on at least one of said at least one time synchronization signal.” Street provides for synchronization based on a GPS signal, but fails to disclose a local synchronization circuit that generates a synchronized timing clock signal by altering a timing clock signal based on at least one time synchronization signal. The GPS timing receivers in Street could be viewed as time synchronization receivers because they synchronize to Universal Coordinated Time (“UTC”), but they fail to alter a timing clock signal in a local synchronization circuit. Street, p. 244, Section 1. INTRODUCTION, and p. 247, Section 5.1 BPA’s experience to date. Street uses these GPS receivers as its timing mechanism “[synchronizing] to Universal Coordinated Time (UTC) by GPS timing receivers.” Street, p. 244, Section 1. INTRODUCTION. The “precise time derived by a GPS timing receiver facilitates accurately time tagging power system events.” Street, p. 244, Section 3. GPS SYSTEM OVERVIEW. Street utilizes the GPS timing receivers to derive UTC time, rather than combining a time synchronization signal with an existing timing clock signal to create a synchronized timing clock signal.

Street fails to disclose time synchronization signals from multiple time synchronization receivers. The device comprises “at least one time synchronization receiver [generating] at least one time synchronization signal.” The time synchronization signals are used to alter a timing clock signal to create a synchronized timing clock signal. Street

merely discloses one GPS receiver for each device and each GPS receiver provides a single synchronizing signal rather than multiple receivers generating multiple signals. Street, p. 247, Figure 4 and 5.1 BPA's experience to date.

Likewise, Street fails to disclose the generation of a synchronized timing clock signal based on multiple time synchronization receivers as in claims 60 and 64. The synchronized timing clock signal is based on at least one time synchronization signal. Street does disclose a GPS timing receiver used to synchronize to UTC. Street, p. 244, Section 1.

INTRODUCTION, and p. 247, Section 5.1 BPA's experience to date. However, as discussed above, the GPS synchronization in Street fails to result in a synchronized timing clock signal based on multiple time synchronization receivers as disclosed in claims 60 and 64.

For at least these reasons, Street does not anticipate independent claims 43, 60 and 64. Accordingly, Applicant requests that the Examiner withdraw this rejection of claims 43, 60 and 64.

Dependent claims 44-53 and 61-63 were also rejected pursuant to 35 U.S.C. § 102(b) as being anticipated by Street. Dependent claims 44-53 and 61-63 should be allowed for the reasons set out above for the independent claims. Applicant therefore requests that the Examiner withdraw this rejection of these claims.

## **V. REJECTIONS UNDER 35 U.S.C. § 103(a)**

Claim 54-59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Street in view of Miller. Neither Street nor Miller disclose all of the limitations of these claims. In particular, Street in view of Miller fail to disclose a local synchronization circuit as mentioned above.

Independent claim 54 relates to a "system for measuring the delivery of electrical energy." The system comprises "a digital network" and "at least one device coupled with said network." The "at least one device" discloses "at least one sensor...operative to sense at least one electrical parameter ... and generate at least one analog signal." At least one analog to digital converter is coupled with the sensor and a processor is coupled with the analog to digital converter. A local synchronization circuit is coupled with both the

processor and at least one time synchronization receiver that generates at least one time synchronization signal. The local synchronization circuit is “operative to receive at least one timing clock signal and generate a synchronized timing clock signal ... by altering said at least one timing clock signal based on at least one of said at least one time synchronization signal.”

Miller discloses a “flexible, modular multichannel continuous real-time harmonic analyzer with the capability of precision time stamping.” Miller, p. 1813, Abstract. The system “is designed primarily for the continuous analysis of power system harmonics in real-time” Miller, p. 1813, INTRODUCTION.

As was discussed above, Street fails to disclose a local synchronization circuit and a synchronized clock timing signal. Miller also fails to disclose a local synchronization circuit “coupled with [the] processor [and] operative to receive at least one timing clock signal and generate [a] synchronized timing clock signal ... by altering said at least one timing clock signal based on at least one of said at least one time synchronization signal” as in claim 54. Like Street, Miller fails to disclose a local synchronization circuit that generates a synchronized timing clock signal. Miller also fails to disclose multiple time synchronization receivers in a device with multiple synchronization signals as discussed above. Accordingly, Applicants request that the Examiner withdraw this rejection of independent claim 54.

Dependent claims 55-59 were also rejected pursuant to 35 U.S.C. § 103(a) as being anticipated by Street in view of Miller. Dependent claims 55-59 should be allowed for the reasons set out above for the independent claim. Applicant therefore requests that the Examiner withdraw this rejection of dependent claims 55-59.

Attached hereto is a marked-up version with changes and an unmarked version of the specification. Also attached is a corrected version of the drawings.

**CONCLUSION**

Each of the rejections in the Office Action dated March 8, 2005 has been addressed and no new matter has been added. Applicants submit that all of the pending claims are in condition for allowance and notice to this effect is respectfully requested. The Examiner is invited to call the undersigned if it would expedite the prosecution of this application.

Respectfully submitted,

June 7, 2005  
Date

Scott A. Timmerman  
Scott A. Timmerman  
Registration No. 55,678

Attorney for Applicants

BRINKS HOFER GILSON & LIONE  
P.O. BOX 10395  
CHICAGO, ILLINOIS 60610  
(312) 321-4200